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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,522	11/14/2003	Guenther Barho	HOE-788	2225
20028	7590	11/01/2004	EXAMINER	
LAW OFFICE OF BARRY R LIPSITZ 755 MAIN STREET MONROE, CT 06468			NGUYEN, TRAN N	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 11/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/714,522

Applicant(s)

BARRHO ET AL.

Examiner

Tran N. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 06 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-15 and 18-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1-15 and 18-23 is/are allowed.
- 6) ☐ Claim(s) 24-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. **Claims 24-25** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lee** (US 6,713,936) in view of **Takahashi et al** (US 6,548,922).

Lee discloses an electric motor (fig 3-5) comprising:

a housing (h);

at least one rotor (m) provided with magnetized regions and mounted rotatably about a rotor axis in the housing, and

a stator (10, 20) having two stator units, each stator unit including a set of first pole shoes (15, 25) formed as claw poles (16, 26) and a set of second pole shoes (11, 21) formed as claw poles (12, 22) which are disposed around the rotor axis, as well as respective coils (13, 23) positioned following the rotor in the direction of the rotor axis and with its windings arranged to encircle the rotor axis, by means of which the first and second pole shoes can be magnetized, the stator unit having two pole shoe elements of which a first pole shoe element has a first pole shoe carrier which extends transversely with respect to the rotor axis and is disposed on a side of the coil facing the rotor, as well as the first pole shoes formed integrally onto this carrier, which first pole shoes extend away from the first pole shoe carrier in a first direction approximately parallel to the rotor axis, and of which a second pole shoe element has a second pole shoe carrier which extends transversely with respect to the rotor axis and is

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disposed on a side of the coil facing away from the rotor, as well as the second pole shoes formed integrally onto this carrier, which second pole shoes also extend the first direction away from the second pole shoe carrier approximately parallel to the rotor axis beyond the rotor (figs 3-4), and

the first pole shoe elements carrying respective connecting elements (15', 25') which is formed as sleeves integrally onto the first pole shoe carrier and establishes a magnetic circuit between the pole shoe carriers, the connecting element being fixedly connected to the second pole shoe carrier, and wherein the connecting sleeves (15', 25') form a winding former for the coil; wherein

the second pole shoes (11, 21) overlap the coil;

the first and second pole shoes lie on the same cylindrical surface that extends about the rotor axis and that the one-pole shoes are disposed in the gaps between the other pole shoes (figs 3-5);

the pole shoes disposed successively in an azimuthal direction around the rotor axis have identical angular spacings from each other (figs 3-4);

the first and second pole shoes extend so far in the first direction that their ends lie in a common plane running perpendicular to the rotor axis (figs 3-5). Lee substantially discloses the claimed invention, except for the limitations of the connecting elements (15', 25') is welded, particularly laser welded, to the second pole shoe carrier.

Takahashi, however, teaches a stator having two stator parts (31a, 31b of figs 11-12) bonded by laser welding. Those skilled in the art would understand that Lee's essential disclosure of the second pole shoe carrier having a hole for fixedly attached to the connecting elements (15', 25') while Takahashi important teaching is two stator parts can be bonded by laser welding. In fact, laser welding is well known in the art (see cited refs). Furthermore, there are many techniques to bond two structural elements such as adhesive agent or welding. These

mechanical attachment techniques are well known in the art and would be a matter of obvious engineering design choice to select a suitable bonding technique, such as laser welding, for fastening the stator parts together.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the motor by bonding the connecting elements to the second pole shoe carrier using laser welding, as taught by Takahashi. Doing so would require only skills in the art because laser welding is well known in the art, and doing so would ensure the attachment therebetween two components.

1. **Claims 26-28** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lee** in view of **Perucchi et al (US 4,417,166)** and **Martin et al (US 3,676,577)**.

Lee discloses the claimed invention, except for the limitations of the electrically insulating coating on the sides that facing the coil of the connecting element and the pole shoe carrier, particularly the insulating material is glass coating comprising quartz.

Perucchi, however, teaches a stator structure not employing a coil spool or bobbin, but having the core part (7) of stator core (6) serves as the coil spool support, wherein the core part (7) is coated on all with an insulating film (9). This film, on the order of less than or up to 10 microns thickness and is composed of a resin material, once deposited, has the properties of being strongly adherent to the metal of core (6), insulating, compact, and hard, so as to constitute a good support for the turns of copper wire forming coil (8).

Regarding the glass material comprising quartz, **Martin** however teaches that quartz is for an excellent temperature resistant insulation if the electrical component is not prior to being in heat-treating.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the motor by providing the sides that facing the coil of the connecting element and the

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pole shoe carrier with an electrically insulating coating, as taught by Perucchi. Doing so would enable the stator elements serves as coil spool to support the stator coil, wherein the stator elements that function as the coil spool is provided with insulating material to ensure the electrical insulation between the stator elements and the coil. This would reduce additional parts, i.e., coil spool, to the stator structure while the coil support and its insulating to the stator parts are provided. Furthermore, it would have been obvious to one skilled in the art at the time the invention was made to modify the motor by selecting glass material comprising quartz as the insulating material, as taught by Martin. Doing so would ensure the insulating coat having excellent temperature resistance. Also, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claims 27-28, Perucchi's and Martin's essential teachings are to provide an insulating coating to the stator core so that the insulated portion can be used as coil bobbins to support the coil thereof. Those skilled in the art would understand that glass material, in general and quartz in particular, is nonmetallic. Therefore, the material is obviously having the corrosion resistant characteristics.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to essentially apply the Perucchi's teaching by coating any area of the pole shoe carriers, the connecting elements that are in direct contact with the stator coils in order to electrically insulating the stator parts from the stator coils.

Allowable Subject Matter

Claim 1-15, and 18-23 are allowed.

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

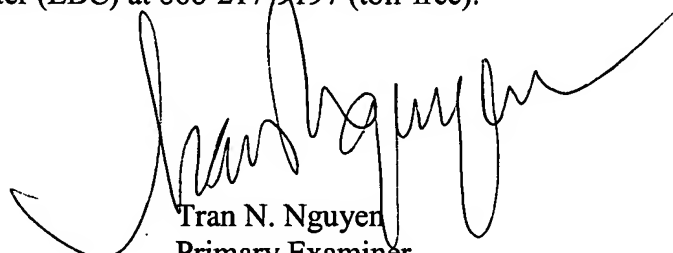
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran N. Nguyen whose telephone number is (571) 272-2030. The examiner can normally be reached on M-F 7:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571)-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tran N. Nguyen
Primary Examiner
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